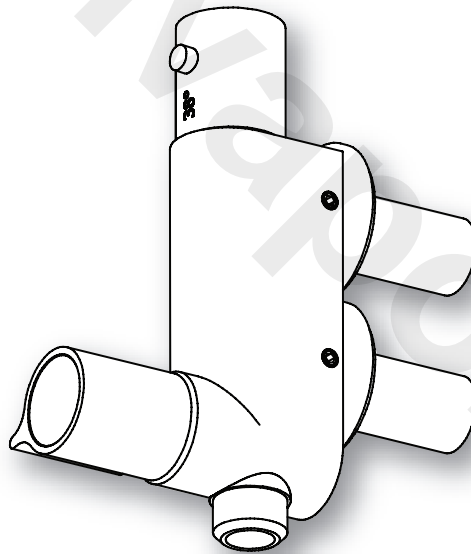


inta

Thermostatic Shower Valve

10019CP

Installation and Maintenance Instructions



inta

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In this procedure document we have endeavoured to make the information as accurate as possible.

We cannot accept any responsibility should it be found that in any respect the information is inaccurate or incomplete or becomes so as a result of further developments or otherwise.

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Introduction

This installation guide has been produced for the 10019CP thermostatic shower with concealed supply pipes and covers the installation, operation and maintenance.

Please read the enclosed instructions before commencing installation.

WE RECOMMEND THAT THE INSTALLATION OF ANY INTA PRODUCT IS CARRIED OUT BY AN APPROVED INSTALLER.

Please read the enclosed instructions before commencing the installation of this product please note;

- The installation must be carried out strictly in accordance with the Water Supply (Water Fittings) Regulations 1999 and any local water authority regulations.
- If in any doubt, we recommend that you should contact either your local water authority, the secretary of the Water Regulations Committee at the WRc on Tel: 01495 248454 or The Institute of Plumbing on Tel: 01708 472791.
- Please check that all the components are in the box, before commencing installation.

Technical Specification

This thermostatic shower valve is suitable for use on all common types of plumbing system including gravity supplies, fully pumped, modulating combination boilers, unvented water heaters and unbalanced supplies i.e. cold mains & tank fed hot. They are not suitable for non-modulating combination boilers.

Designated Pressure	LP & HP
Max. Static Pressure	10 bar
Temperature Stability	± 2°C
Inlet Temperature Range	55°C to 65°C: Hot Supply ≤ 25°C: Cold Supply
BS EN 1111 Working Pressure Ranges	0.5 to 5.0 High Pressure
Min Temp Differential (Mix to Hot) for fail-safe	10°C
Max. Pressure Inlet Differential	5:1
Preset Temperature	38°C

Preparation for Installation

- Ensure all the parts are present before commencing the installation of any Inta product.
- Before commencing the installation ensure the site conditions are suitable.
- The hot and cold supply pipes can be concealed behind a stud wall or embedded into the a solid wall.
- When installing, care must be taken not to damage / affect the finish of this product.
- Service valves must be installed in both the hot and cold water supply pipes, in order to isolate the shower valve should servicing be required in the future.
- Flush the water supply pipes thoroughly prior to installation. Do not allow debris, PTFE or any metal particles enter the shower valve.
- Turn off the water supply.

Installation Instructions

Stud Wall

Installation with the supply pipes concealed behind a stud wall.

Cut 2 holes 24 to 26mm in diameter at 45mm centres in the plaster board or wall plate.

Finish tiling the wall cutting 2 holes 24mm to 26mm in the tiles.

Insert the shower valve through the two holes and secure with the 2 back nuts, do not over tighten.

Connect the hot supply to the lower inlet and the cold to the upper.

A swivel to copper connector or an olive and compression nut are 2 typical fittings for making the connections.

Connect the flexible hose of the shower kit to the mixed water outlet and secure the rail to the wall.

Turn on the water supplies and check joints for leakage.

Solid Wall

Installation with the supply pipes embedded into a solid wall.

Cut a channel into the wall for the supply pipes allowing sufficient depth to position the concealing plates to as shown on the finished tiled surface.

Connect the supply pipes to the valve and turn on the water supplies and check for leakage from any joints.

Turn off the water supplies.

Unscrew the two socket set screws and carefully remove the body and concealing plates.

Fill the channel and finish tiling the wall.

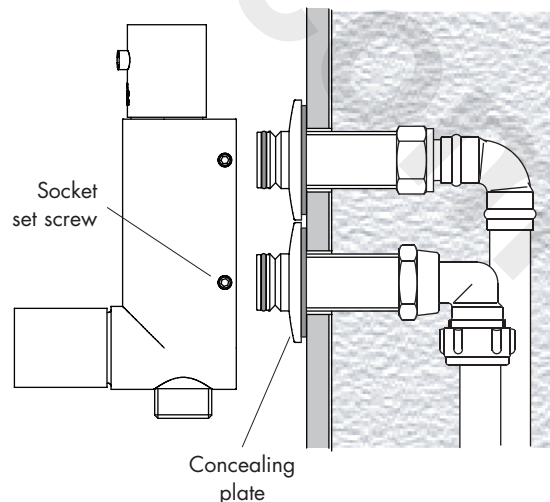
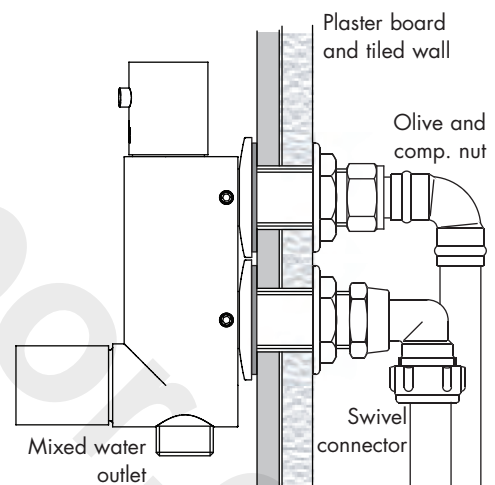
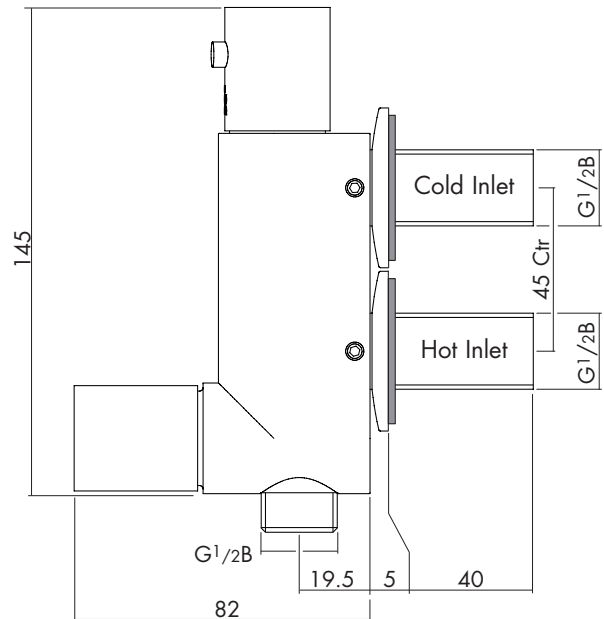
Seal the holes between inlets and tiles with silicone sealer.

Refit the concealing plates and push firmly to the wall surface.

Carefully refit the valve and re-tighten the socket set screws.

Connect the flexible hose of the shower kit to the mixed water outlet and secure the rail to the wall.

Turn on the water supplies and check for correct operation.

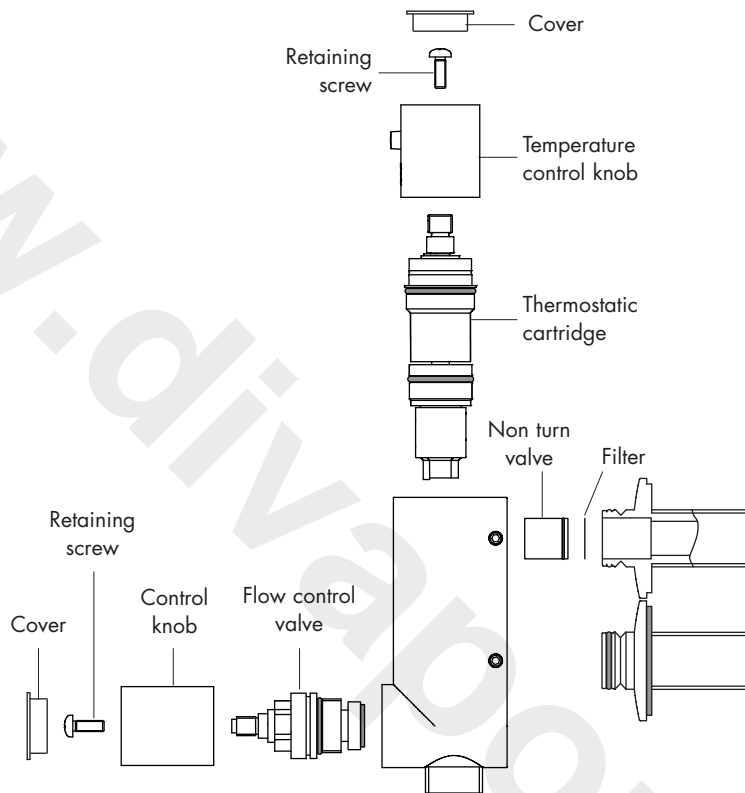


Operation

The red button on the temperature control knob locks the mixed water temperature to 38°C, press the button to release the knob to increase the or lower the water temperature.

Turning the flow control knob anti-clockwise turns on the water and regulates the amount flowing.

Components



Flow Control Valve Replacement

Isolate both the hot and cold water supplies

Remove the cover and unscrew the control knob retaining screw and remove the flow control knob. Using a suitable spanner unscrew the flow control valve.

Replace with a new valve or replace the disk washer as required and assemble in the reverse order.

Cartridge Replacement

Isolate both the hot and cold water supplies.

Remove the cover and unscrew the control knob retaining screw and remove the temperature control knob.

Carefully pull the cartridge out of the body

If any of the 'O' ring seals or the thermostatic element is blocked or damaged they must be replaced.

Using neutral silicon grease re-lubricate the internal moving components of the valve.

Re-assemble in the reverse order.

The valve must then be re-commissioned following the procedure detailed.

Filter Cleaning and Non Return Valve Removal

- Isolate both the hot and cold water supplies and disconnect the shower riser from the body.
- Unscrew the 2 socket set screws and carefully pull the body from the inlets.
- Carefully pull out the non return valves, flush out any debris and check for correct operation.
- Remove the filters and flush thoroughly, remove any debris collected in front of the filter from the inlets.
- Replace non return valves and filters if damaged with new.
- Re-assemble in the reverse order turn on both supplies and check joints for leakage.

Aftercare

- Inta thermostatic shower valves have a high quality finish and should be treated with care.
- An occasional wipe with a mild washing-up liquid on a soft damp cloth followed by a thorough rinsing is all that is required.
- Do not use an abrasive or chemical household cleaner** as this may cause damage.

IMPORTANT

The following information is required when the thermostatic shower valve is used in a TMV2 Applications under the requirements of BS EN 1111: 1999 "Sanitary tapware – Thermostatic Mixing Valve (PN 10) – General Technical Specification".

Supply Conditions

The supply conditions to the Thermostatic Mixing Shower Valve must comply with the following;

Conditions		High Pressure
Maximum Static Pressure	bar	10
Flow Pressure, Hot & Cold	bar	0.5 to 5
Hot Supply Temperature	°C	55 to 65
Cold Supply Temperature	°C	≤ 25°C

Note: Valves operating outside these conditions cannot be guaranteed by the Scheme to operate as type 2 valves.

- The valves designation of use, **HP** if tested against BS EN 1111.
- For valves designated for use HP only, if a water supply is fed by gravity then the supply pressures should be verified to ensure the conditions of use are appropriate for the valve.

Introduction

The thermostatic shower valve has been specifically designed and manufactured to meet the requirements of BS EN 1111:1999 and TMV2 Type Scheme. The valve has been independently tested and approved as a TYPE 2 valve under the BuildCert TMV2 scheme by the WRc Testing & Evaluation Center.

Application

The thermostatic mixing shower valve has been independently tested by WRAS and certified as meeting the requirements of the BS EN 1111:1999 under the TMV2 Scheme as being suitable for use on the following designations.

Recommended Outlet Temperatures

The BuildCert TMV scheme recommends the following set maximum mixed water outlet temperatures for use in all premises:

Code	Application	Recommended Hot Water Temperature
HP-S	Shower	41°C

The mixed water temperature must never exceed 43°C.

The maximum mixed water temperature can be 2°C above the recommended maximum set outlet temperature.

Recommended Outlet Temperatures

Note: 43°C is the maximum mixed water temperature from the shower. The maximum temperature takes account of the allowable tolerances inherent in thermostatic shower valves and temperature losses.

It is not a safe bathing Temperature for adults or children.

The British Burns Association recommends 37 to 37.5°C as a comfortable bathing temperature for children. In premises covered by the Care Standard Act 2000, the maximum mixed water outlet temperature is 43°C.

Installation

Important: - The following instructions must be read prior to the installation of the thermostatic shower valve. The installer of the thermostatic shower valve must comply with the requirements of the Water supply (Water Fittings) Regulations 1999 and also be aware of their responsibility and duty of care to ensure that all aspects of the installation comply with the regulations.

It has been brought to our attention that flushing water systems using certain chemicals may wholly or partially remove the lubricant from the internal workings of the valve, which may adversely affect its performance. We recommend that following flushing the system with chemicals; valves are checked for correct operation.

1. It is essential that before installing any thermostatic shower valve to ensure that the supply conditions of the system to which the valve is intended to be fitted are checked to confirm compliance with the parameters as quoted within the technical specification and conditions on which the approval is granted i.e. verify supply temperatures, supply pressures, risk assessment.
2. Consideration must be made for the possibility of multiple / simultaneous demands being made on the supply system whilst the thermostatic shower valve is in use, all practical precautions must be made to ensure that the valve is not affected. Failure to make provision within the pipe sizing etc. will affect the performance of the shower valve.

Installation

3. The supply to which the thermostatic shower valve is to be installed must be thoroughly flushed and cleaned to remove any debris, which may have accumulated during the installation. Failure to remove any debris will affect the performance and the manufacturer's warranty of the product. In areas that are subject to aggressive water, provision must be made to treat the supplies prior to the supplies entering the shower valve.
4. The thermostatic shower valve has been designed for vertical installation and surface mounting.
5. The thermostatic shower valve will be installed in such a position that maintenance of its components, associated valves and the commissioning and testing of the shower valve can be undertaken.
6. The hot and cold water supplies must be connected to the valve strictly in accordance with the indications on the body of the valve i.e. hot water supply to the hot port of the valve.
7. In a situation where one or both of the water supplies are excessive, it is recommended to fit a Pressure Reducing Valve to reduce the pressure(s) to within the limits as quoted previously.
8. Any thermostatic shower valve must be fitted with a back flow prevention device, such as check valves to prevent the cross contamination of supplies. The thermostatic shower valve is supplied complete with integral insert check valves and strainers.
9. The fitting of isolation valves is required as close as is practicable to the water supply inlets of the thermostatic shower valve.
10. The fitting of strainers is recommended as close as is practicable to the water supply inlets of the thermostatic shower valve.
11. It is essential that the fail safe thermostatic shower valve should not be installed in situations where there is a possibility of the valve being deprived of water or where demands for water are greater than the actual stored supplies.
12. To ensure that the performance levels of the thermostatic shower valve are maintained (in the event of cold water failure), the temperature of the hot water supply at the point of entry to the thermostatic shower valve must be a minimum of 10°C above the commissioned mixed water discharge temperature.
13. The fail-safe thermostatic shower valve must not be subject to any extreme temperature variations either during the installation or under normal operating conditions.

Commissioning

Important: - The following instructions must be read and understood prior to commissioning the thermostatic shower valve. If under any circumstances there are aspects to the installation / system which do not comply with the specification laid down, the valve **MUST NOT** be put into operation until the system / installation complies with the specification. However if all these conditions are met, proceed to set the temperature as follows;

1. Ensure that the system is thoroughly cleaned and free from any debris prior to commissioning the thermostatic shower valve.

Commissioning

2. Commissioning the temperatures must be carried out using a suitably calibrated thermometer – preferably a digital thermometer. The sensing part of the thermometer probe must be fully submerged in the water when testing.
3. The valve must be commissioned taking into consideration any fluctuations, which may occur within the system due to simultaneous demands. It is advisable that any outlets which are connected to the same supply as the shower valve are open during setting of the mixed water temperature. It is advisable to ensure that the water temperatures are established before any attempt to commission.
4. Once the supply temperatures are stable and the normal operating conditions are established, the shower valve can be commissioned. The following sequence should be followed when commissioning the valve;
 - 4.1 The first step in commissioning a thermostatic shower valve is to check the following:
 - The designation of the thermostatic shower valve matches the application
 - The supply pressures are within the valve's operating range.
 - The supply temperatures are within the valve's operating range.
 - Isolating valves (and 'Y' strainers preferred) are provided.
 - 4.2 If all these conditions are met, proceed to set the temperature as stipulated in the manufacturer's installation instructions.
 - 4.3 Measure and record the temperature of the hot and cold water supplies at the connection to the valve.
 - 4.4 Measure and record the temperature of the water discharging from the valve.
 - 4.4 Isolate the cold water supply to the valve and monitor the mixed water temperature.
 - 4.6 Measure and record the maximum mixed water temperature and the final temperature. The final temperature found during the test should not exceed the values quoted.
 - 4.7 Record all the equipment used during the commissioning.
 - 4.8 The mixed water temperature at the terminal fitting must never exceed 2°C above the set temperature.
5. If the mixed water temperature exceeds the recommended temperature of 41°C by 2°C or does not reach 41°C the shower valve can be adjusted as follows:
 - 5.1 With stable supply conditions remove the temperature control knob.
 - 5.2 Rotate the temperature control knob by one spline clockwise to increase the temperature and one spline anticlockwise to reduce it.
 - 5.3 Measure the water discharging from the shower.
 - 5.4 Repeat 5.2 until the desired temperature is stabilised and record the temperature.
 - 5.5 Repeat 4.4 and 4.5
 - 5.6 Secure the temperature control knob with the retaining screw and re-fit the cover.
6. The above information must be recorded and updated on every occasion when any work is carried out on the valve.

In Service Testing

It is a requirement that all TMV2 approved valves shall be verified against the original set temperature results once a year. When commissioning / testing is due the following performance checks shall be carried out.

1. Measure the mixed water temperature at the outlet.
2. Carry out the cold water supply isolation test by isolating the cold water supply to the shower, wait for five seconds if water is still flowing check that the temperature is below 43°C.
3. If there is no significant change to the set outlet temperature ($\pm 2^{\circ}\text{C}$ or less from the original settings) and the fail-safe shut off is functioning, then the valve is working correctly and no further service work is required.

Notes:

- If there is a residual flow during the commissioning or the annual verification (cold water supply isolation test), then this is acceptable providing the temperature of the water seeping from the valve is no more than 2°C above the designated maximum mixed water outlet temperature setting of the valve.
- Temperature readings should be taken at the normal flow rate after allowing for the system to stabilise.
- The sensing part of the thermometer probe must be fully submerged in the water that is to be tested.
- Any thermostatic shower that has been adjusted or serviced must be re-commissioned and re-tested in accordance with the manufacturers' instructions

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